

JOHN

Phone Temporarily
Out of Service Please
call 505-261-1111 for
Assistance

**Man of Steel –
Alexander L Holley**

Everyone knows Joseph Warren

**Christine and John on staying
together**

Fresh Flowers

Go to holleypix.com



Welcome to JOHN

June has passed and 2019 is half over, but it was a good half. July 4th is always a neat time for Christine and I. We stay home and watch the fireworks from our patio. Yes, the camera is on the tripod ready to shoot, just in case! A short note about this issue's cover. A little whimsy, but reflects how things are for all of us now. Everyone wants to know what to do, but the methods given are confusing at best.

Alexander Lyman Holley was responsible for bringing the Bessemer Steel process to America. His improvements to the process allowed for the building of 16 large steel works. His plans for these factories allowed the Steel industry to flourish as the country rapidly expanded. It was hard to leave this great person with just a brief look at all that he gave to his country. But this brief portion of his life may encourage more research about his life's adventures.

"Everyone Knows Joseph Warren" was the result of yours truly doing some Rev. War research. His journey and involvement in the battle of Bunker Hill should be known to all Americans. Enjoy this brief on his life and again, there is an encouragement to have you all research a little more. Might generate a cool story for the July 4th picnic!

Christine and I continue to be blessed with our lives together. As we approach 26 years, I thought that I would include an updated report on our story that we posted a couple of years ago.

This issue might appear to be a little shorter story wise, let's just check it up to the summer time blues. Enjoy! JAH

P.S. I am always looking for stories to include in JOHN, let me know if you would like to share.

Alexander Lyman Holley was born in 1832 to a prominent Connecticut family with a long history in the iron business. His father, a former Connecticut governor, owned a cutlery factory, (Holley Manufacturing Co.) where Holley gained his first exposure to industrial-scale manufacturing machinery. Although the family's wealth and connections (and his own robust intellect) positioned him for a distinguished career in law or politics, his capacity for careful and discriminating observation and his notable drawing talents marked him as an engineer very early in his life. Holley was the first student to graduate from Brown University in engineering, receiving his bachelor of philosophy in 1853. Holley was obsessed with machinery and the never-ending challenge of making things work better.



At Brown University in Providence, RI, Holley picked up practical experience in locomotive engineering and design at local companies. His interest in railroad technology led to a close friendship with Zerah Colburn, a prominent rail engineer and author. Holley and Colburn traveled Europe by train, documenting the more advanced state of that continent's rail systems on behalf of top U.S. railroad executives. Their treatises on the subject helped inspire investment in infrastructure upgrades back home. Holley's own literary interests took shape at this point, as he began a prolific side career as a journalist, technical illustrator, and publisher of journals on railway technologies. He wrote numerous reference works, technical books, and articles for a wide range of specialty and general interest publications, including the New York Times. Holley learned of Bessemer's new steel-making process, in which compressed air was blown over molten raw iron to remove impurities, creating high-quality steel far less expensively than traditional methods. Technical issues and a lack of scientific understanding of the underlying metallurgical processes impeded the technique's wide acceptance in Britain, but Holley's knife-factory background and Ivy League training enabled him to perceive the exciting potential of the Bessemer process.

In 1863, Holley purchased the rights to bring the Bessemer process to the U.S. Ten of his 15 lifetime patents were for improvements in the process that adapted it for conditions in the U.S. The first Bessemer plant was established at Troy, NY in 1865 under his supervision, and enlarged in 1867. He also built the works at Harrisburg, PA in 1867, and later planned those at North Chicago and Joliet, the Edgar Thompson works at Pittsburg, and the Vulcan works at St. Louis, besides acting as consulting engineer in the designing of the Cambria, Bethlehem, Stanton, and other works. The history of his career after 1865 is substantially that of the Bessemer manufacture in the United States. After the formation of the Bessemer association he issued confidential reports to it on the various branches of steel manufacture. During his lifetime the capacity of the American Bessemer plant was raised from that of about 900 tons a month to more than 10,000 tons for the same period. Enormous Bessemer steel works took shape in cities like Troy, NY, and Harrisburg, PA. These and a dozen other steel towns across the industrial east fed the nation's growing hunger for cheap, high-quality Bessemer steel. Holley's mills churned out steel for the bridges, railways, skyscrapers, and battleships that would make the U.S. the strongest economic power in the world.

As with his journalism, Holley's professional endeavors were geared toward bringing people of different backgrounds together around key topics in science and engineering. His passion for research-driven progress in the practice of engineering led him to play a seminal role in the founding of the nation's most important professional organizations aimed at education, standardization, and disciplinary excellence.

He took the lead in the founding of the American Society of Mechanical Engineers (ASME), and he chaired the first meeting of its founding members in 1880. He played major roles in the creation of the Institute of Mining, Metallurgical and Petroleum Engineers (AIME) and the American Society of Civil Engineers (ASCE).

The break-neck pace of Holley's work eventually took its toll on his health. He died from peritonitis in 1882 at age 49.



Less than a decade after his death, the three organizations with which he was most closely linked – ASME, ASCE, and AIME – joined forces to commission the 12 ½ foot tall bronze and limestone Holley memorial in Manhattan's Washington Square Park.



Portrait of Alexander Lyman Holley
Housed at the National Portrait
Gallery in Washington, DC

Holley and Education

Since Holley's hand has guided many of the improvements in the Bessemer Steel process, he was often asked to speak concerning them. His ability to describe technical matters with clarity and precision was outstanding & he quickly became one of the most sought-after speakers of the time.

He never lost interest in the problems of students of engineering. He had strong opinions about how students ought to go about getting information. He advised a student that he should attempt to write a thesis on the new open hearth process only if the student were able to spend a week or two studying the process first hand. The student, he noted, might best observe the process at the Otis Steel Company in Cleveland, OH, where Holley would help the student gain entrance. In addition, Holley offered to lend the young man a paper on the open hearth process by William Hackney, the only one in existence at the time. But, Holley warned, "merely copying this will be of no use to you or anyone."

One of Holley's best lectures has become known as a near classic in its field; it was delivered in 1872 at the Stevens Institute of Technology. The subject was Bessemer machinery. What follows is Alexander in his own words describing part of the steel making process, "the Blow."

" A Blow." —However interesting the foregoing facts may be to steel makers, or however dull to general readers, a " blow "—the thing itself—is remarkable alike to the scientific and the unprofessional observer, especially at night when the splendor of this intense and concentrated combustion is not rivalled by sunshine, and when the imagination invests each ponderous machine with mysterious life and awful energy.



The cavernous room is dark, the air sulphurous, the sounds of suppressed power melancholy and deep ; half-revealed monsters with piercing eyes crouch in the corners, spectral shapes ever flit

about the walls, and lurid beams of light anon flash in your face as some remorseless beast opens its red-hot jaws for its iron ration. Then the melter thrusts a spear between the joints of its armor, and a gustening yellow stream spirts out for a moment, and then all is dark once more. Again and again he stabs it till six tons of its hot and smoking blood fill a great cauldron to the brim. Then the foreman shouts to a thirty-foot giant in the corner who straightway stretches out his iron arm and gently lifts the cauldron away up into the air and turns out the yellow blood in a hissing, sparkling stream which dives into the white-hot jaws of another monster —a monster as big as an elephant with a head like a frog and scaly hide. The foreman shouts again, at which up rises the monster on its haunches, growling and snorting sparks and flame.

What a conflict of the elements is going on in that vast laboratory! A million balls of melted iron, tearing away from the liquid mass, surging from side to side, and plunging down again only to be blown out more hot and angry than before —column upon column of air, squeezed solid like rods of glass by the power of five hundred horses, piercing and shattering the iron at every point, chasing it up and down, robbing it of its treasures only to be itself decomposed and hurled out into the night in roaring blaze.

As the combustion progresses, the surging mass within the converter grows hotter, throwing out splashes of liquid slag —and the discharge from its mouth



changes from sparks and streaks of red and yellow gas, to thick, full, white, howling, dazzling flame. But such battles cannot last long. In a quarter of an hour the iron is stripped of every combustible alloy, and hangs out the white flag. The converter is then turned upon its side, the blast shut off, and the recarburizer run in. Then for a moment the war of the elements rages again ; the mass boils and flames with higher intensity, and with a rapidity of chemical reaction sometimes throwing it violently out of the converter mouth ; then all is quiet, and the product is steel—liquid, milky steel, that pours out into the ladle from under its roof of slag, smooth, shining, and almost transparent. ALH

JOSEPH WARREN

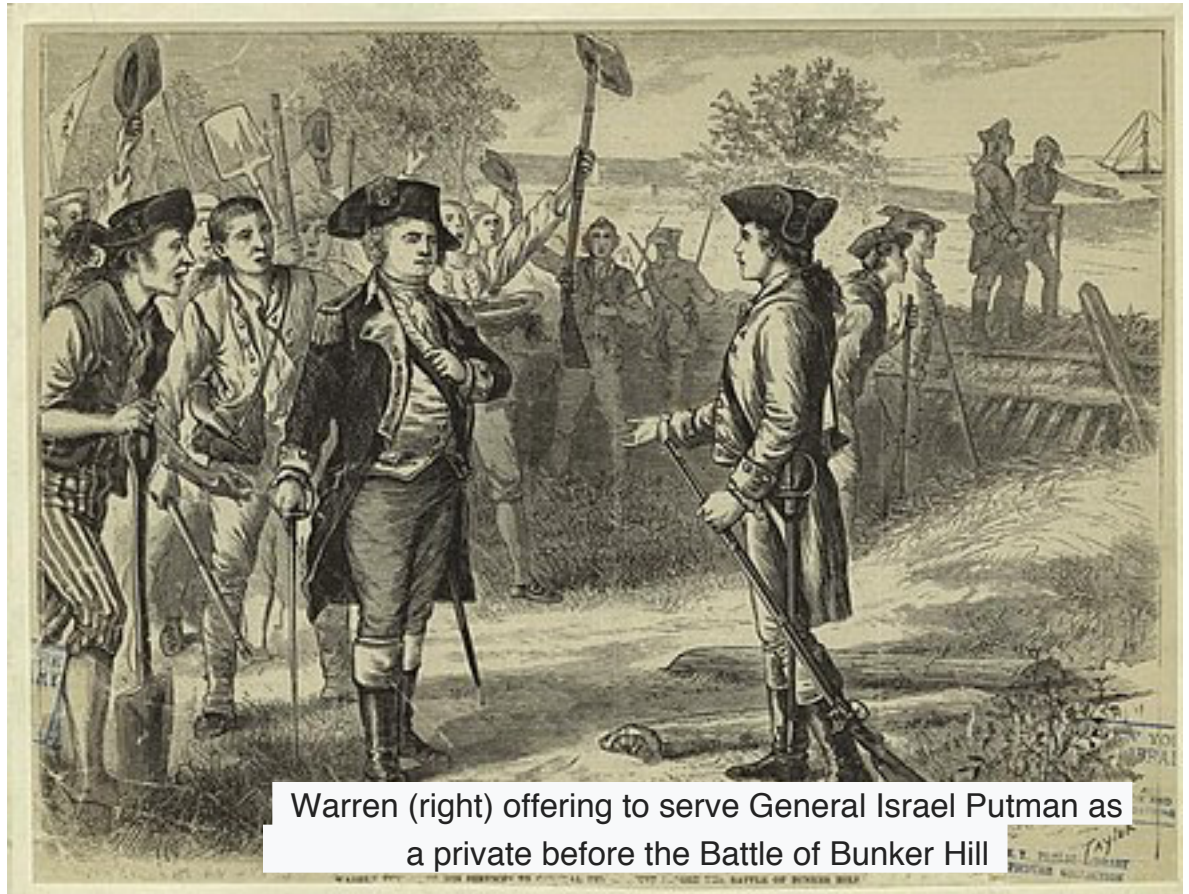
MARTYR OF BUNKER HILL



Joseph Warren was born in Roxbury, Massachusetts in 1740, he graduated from Harvard in 1759. Somewhat impetuous in his nature, but brave to a fault, Warren craved the task of doing what others dared not to do-the same courage infused in Paul Revere, Samuel Adams, and other patriots. On the anniversary of the Boston Massacre, March 3, 1770, Warren was the orator. While it was a duty which won him distinction, it was also one of peril. English military officers usually attended in order to heckle the speaker and it required a brave man to stand up in Old South Church, in the face of those officers, to boldly proclaim their bloody deeds. It required a cool head and steady nerves, and Joseph

Warren had both. The crowd at the church was immense; the aisles, the pulpit stairs, and the pulpit itself was filled with officers and soldiers of the garrison, always there to intimidate the speaker. Warren was equal to the task but entered the church through a pulpit window in the rear, knowing he might have been barred from entering through the front. In the midst of his most impassioned speech, an English officer seated on the pulpit stairs and in full view of Warren, held several pistol bullets in his open hand. The act was significant; while the moment was one of peril and required the exercise of both courage and prudence, to falter and allow a single nerve or muscle to tremble would have meant failure-even ruin to Warren and others. Everyone present knew the intent of the officer but Warren having caught the act of the officer and without the least discomposure or pause in his discourse, simply approached the officer and dropped a white handkerchief into the officer's hand! The act was so cleverly and courteously performed that the Briton was compelled to acknowledge it by permitting the orator to continue in peace.

On June 14, 1775, three days before the Battle of Bunker Hill (actually Breed's Hill), Dr. Warren was elected Major General by the Provincial Congress of Massachusetts. Without military education or experience, he was placed in the presence of the whole British army. Against the protests of Gen. Artemis Ward, Gen. Israel Putnam and others, Warren chose to shoulder a musket and join the fighting men



behind barricades on the hill. He apparently felt a premonition of his death and declared to Betsy Palmer (whose husband joined the Tea Party and the Battle of Lexington), "Come, my little girl, drink a glass of wine with me for the last time, for I shall go to the hill tomorrow and I shall never come off."

The shooting on June 17, 1775, lasted less than one hour but only because the Patriots ran out of ammunition. Warren had been shot in the back of the head and thrown to the ground. His body was thrown in a ditch by a British officer and buried with others. It was discovered months later and identified by Paul Revere who recognized a false tooth he had made for Warren. He was next buried in the Granary burial ground (Tremont Street, Boston) where he was laid after Masonic ceremonies in King's Chapel and, thirdly, he was buried in the Warren Tomb in St. Paul's Cathedral, Boston, before finally being moved in 1855 to his family's vault in Forest Hills Cemetery.

Joseph Warren - His Legacy

British General Gage reportedly said Warren's death was equal to the death of 500 men. It encouraged the revolutionary cause because it was viewed by many Americans as an act of martyrdom.

At the time of Warren's death, his children were staying with his fiancée, Mercy Scollay, in Worcester as refugees from the Siege of Boston. She continued to look after them, Joseph's youngest brother and apprentice in medicine, John Warren served as a surgeon during the Battle of Bunker



Hill and the rest of the war, and afterwards founded Harvard Medical School and co-founded the Massachusetts Medical Society.

There are at least four statues of Joseph Warren on public display. Three are in Boston — one in the exhibit lodge adjacent to the Bunker Hill Monument, one is on the grounds of the Roxbury Latin School and one is atop the puddingstone at his grave site at the Forest Hills Cemetery (this statue was commissioned by the 6th Masonic District, and dedicated in a ceremony by the Grand Master of Masons in Massachusetts on October 22, 2016). The fourth is in a small park on the corner of Third and Pennsylvania avenues in Warren, Pennsylvania a city, borough, and county all named after the general.

On August 6, Christine and John Holley will be celebrating 26 years of marriage. We enjoy many times together doing things that help create a special bond between us. Here is some marriage advice I would like to share that we as a couple practice daily:

1. Always start and end your days with a hug and kiss.
EVERYDAY. Physical contact with the one you love never tires.
2. Never, never criticize each other. Discussion on behavior is fine, which feels better to you? "Please don't slam the door" or "Why do you always have to slam the door"! Words hurt in the long run especially the ones not thoughtfully spoken. Deep breaths really does wonders sometimes.
3. Never, Never, fight about money, in the end whether you have it or not or do not use it wisely will not make a difference in your relationship with each other. Happy Anniversary, Christine, love ya!

In case you are wondering, no we didn't miss our 25th Annivesary.

In fact it was very special because we had the chance to celebrate in New York with Dick and Linda Simpson, who celebrated their 50th Wedding Anniversary with us as we marked our 25 years together. Dick and Linda were at our wedding and it was only fitting that we celebrate both anniversaries together.



FRESH FLOWERS



Just remember you are BRAVER than you
believe, STRONGER than you seem and
SMARTER than you think.

– Winnie the Pooh –